COMSAR/Circ.4
19 April 1996

Ref. T2/603

JOINT IMO/IHO/WMO MANUAL ON MARITIME SAFETY INFORMATION (MSI)

1 The Sub-Committee on Radiocommunications and Search and Rescue, at its first session (19 to 23 February 1996), noted and approved a Joint IMO/IHO/WMO Manual on Maritime Safety Information (MSI) prepared by WMO and IHO and considered that the standardized text, annexed hereto, would be of value to those who draft navigational warnings, meterological forecasts and warnings as well as to mariners who are expected to use the information they receive. The Sub-Committee was of the opinion that the widest possible use of the manual should be encouraged.

2 Member Governments are invited to bring the annexed IMO/IHO/WMO Manual to the attention of mariners and those involved in the promulgation of navigational warnings and meteorological forecasts and warnings.

3 This circular supersedes COM/Circ.124.

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ANNEX

JOINT IMO/IHO/WMO

MANUAL ON MARITIME SAFETY INFORMATION (MSI)

November 1995

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PREFACE

SOLAS, chapter IV, regulation 12 states, in part, that "Every ship, while at sea, shall maintain a radio watch for broadcasts of maritime safety information on the appropriate frequency or frequencies on which such information is broadcast for the area in which the ship is navigation."

At the request of the Sub-Committee on Radiocommunications (COM 39/29, paragraph 4.8), the International Hydrographic Organization (IHO) and the World Meteorological Organization (WMO) have produced this joint document on the drafting of maritime safety information broadcasts.

The document contains sections from the "IHO/IMO Guide to Drafting Radio Navigational Warnings for the World Wide Navigational Warning Service", and relevant section of the WMO Publication "Manual on Marine Meteorological Services the WMO System for the Preparation and Dissemination of Meteorological Forecasts and Warnings for the High Seas under the Global Maritime Distress and Safety System (GMDSS)".

Although this is an IMO Publication, it is intended that the responsible organizations will maintain their respective sections of this joint IMO/IHO/WMO document.

1 - GENERAL INFORMATION

This book provides a practical guide for anyone who is concerned with drafting radio navigational warnings or with the issuance of meteorological forecasts and warnings for the high seas under the GMDSS. It is assumed throughout that the navigational warnings are being issued under the auspices of the IHO/IMO World-Wide Navigational Warning Service (WWNWS) and that the meteorological forecasts and warnings are being issued under the patronage of the WMO, and in accordance with the requirements of IMO resolution A.706(17). The WWNWS includes two major international radio warning services as components; namely, NAVAREA warnings and Coastal warnings.

It is particularly intended to provide the best form of words for use in all types of navigational warnings and meteorological forecasts and warnings in the English language (See Notes 1 and 2). Note has been taken of the Standard Marine Navigational Vocabulary, where appropriate.

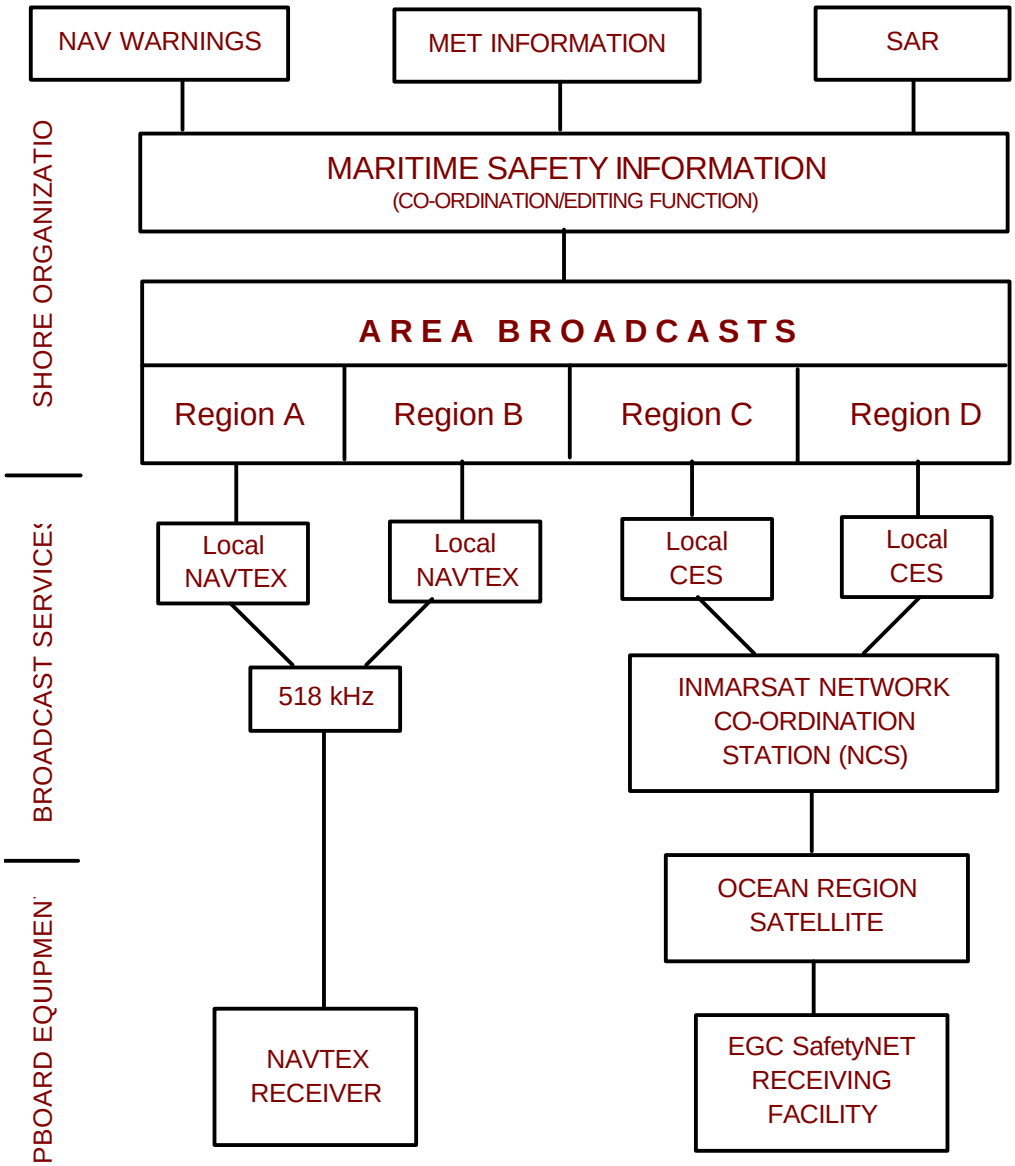
This document cannot provide specimen texts for every type of event which may occur. However, the principles illustrated herein may be applied in general to drafting messages for every kind of navigational warning and covering all types of hazards and for the issuance of meteorological forecasts and warnings for the High Seas under the GMDSS.

Notes: 1. See WWNWS Guidance Document, section 5.3, IHO/IMO Special Publication S-53.
2. See WMO Publication "Manual on Marine Meteorological Forecasts and Warnings for the High Seas under the Global Maritime Distress and Safety System (GMDSS)."

2 - PROMULGATION OF MARITIME SAFETY INFORMATION

2.1 INTRODUCTION

2.1.1 The maritime safety information service is an internationally co-ordinated network of radio broadcasts containing information which is necessary for safe navigation, received in all ships by equipment which automatically monitors the appropriate frequencies and prints out in simple English only that information which is relevant to the ship. This concept is illustrated in figure 1.



NOTE: HF NBDP system may be used to provide an additional supplementary equivalent service to EGC SafetyNET until full implementation of the GMDSS on 1 February 1999.

Figure 1 - International Maritime Safety Information Service
(Source: IMO A.705(17)

2.1.2 Maritime safety information is of vital concern to all vessels. It is therefore essential that common standards are applied to the collection, editing and dissemination of this information. Only by doing so will mariners be assured of receiving the information they need, in a form which they understand, at the earliest possible time.

2.1.3 The purpose of IMO resolution A.705(17) is to set out the organization, standards and methods which should be used for the promulgation and reception of maritime safety information.

2.2 DEFINITIONS

2.2.1 For the purposes of this Recommendation, the following definitions apply:

.1 Maritime Safety Information - navigational and meteorological warnings, meteorological forecasts and other urgent safety-related messages.

.2 Maritime Safety Information service - the co-ordinated service of navigational and meteorological warnings, meteorological forecasts and distress alerts.

.3 World-Wide Navigational Warning Service (WWNWS) - the internationally co-ordinated service for the promulgation of navigational warnings as set out in IMO resolution A.706(17).

.4 Meteorological information - the marine meteorological warning and forecast information described in regulation V/4(b)(i) and (ii) of the 1974 SOLAS Convention.

.5 NAVAREA/METAREA - a geographical sea area, as shown in figure 2, established for the purpose of coordinating the transmission of radio navigational and meteorological warnings. Where appropriate, the term NAVAREA/METAREA followed by an identifying roman numeral, may be used as a short title. The delimitation of such areas is not related to and shall not prejudice the delimitation of any boundaries between States.

.6 Distress alert means the initial shore-to-ship distress message broadcast in accordance with the Radio Regulations.

.7 NAVTEX means the system for the broadcast and automatic reception of maritime safety information by means of narrow-band direct-printing telegraphy.

.8 International NAVTEX service means the co-ordinated broadcast and automatic reception on 518 kHz of maritime safety information by means of narrow-band direct-printing telegraphy using the English language, as set out in the NAVTEX Manual (IMO Publication 951).

.9 National NAVTEX service means the broadcast and automatic reception of maritime safety information by means of narrow-band direct-printing telegraphy using frequencies and languages as decided by the Administrations concerned.

.10 International SafetyNET service means the area-addressable global broadcast system,

provided by Inmarsat, through the geostationary maritime communication satellite network for promulgation of maritime safety information, as set out in the International SafetyNET Manual (IMO Publication 908).

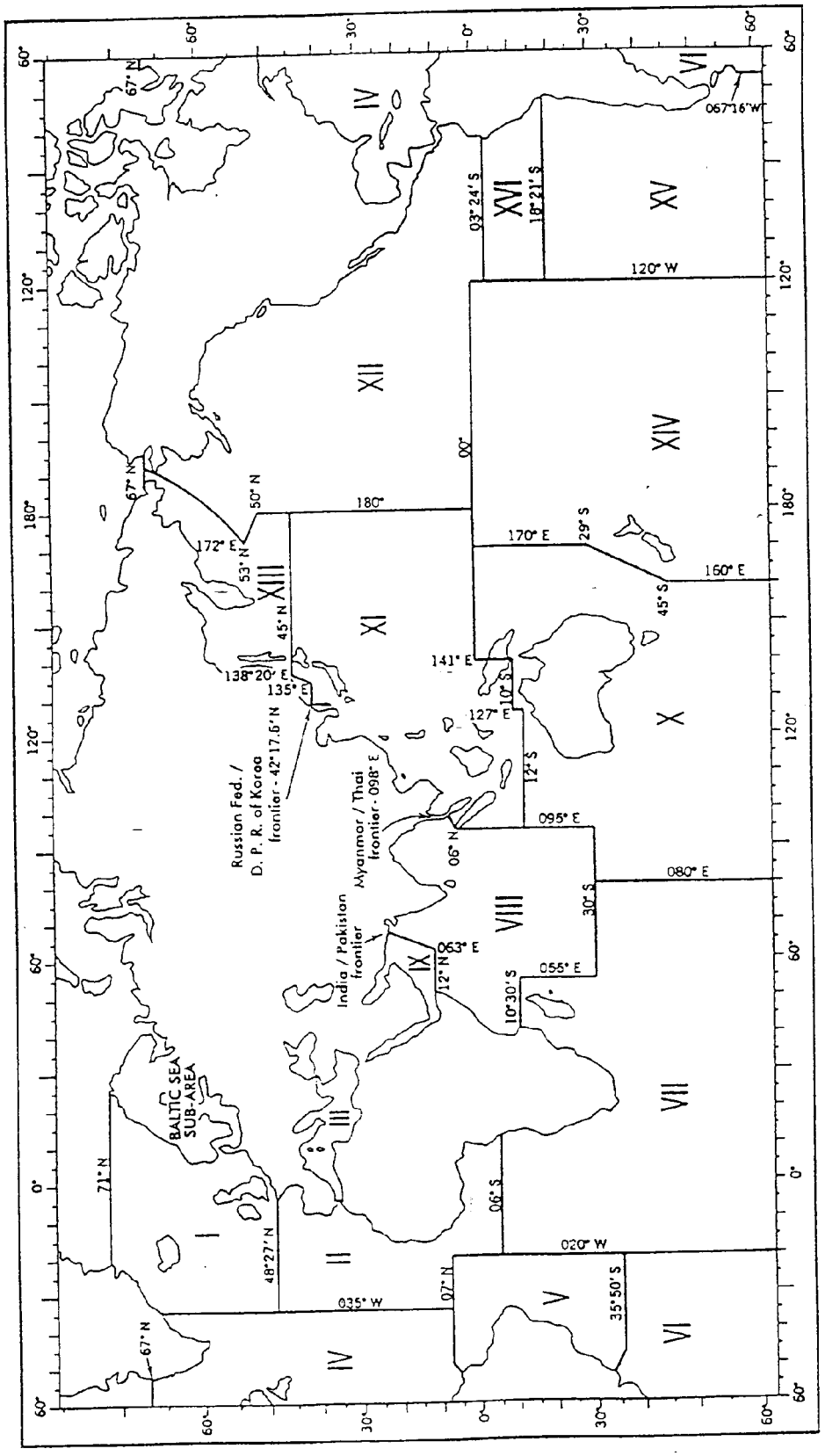


Figure 2. - Geographical Areas for Co-ordinating and Promulgating Radionavigational and Meteorological Warnings.

2.3 BROADCAST SERVICES

2.3.1 Two systems are used for broadcasting maritime safety information. They are provided specifically to serve the requirements of chapter V of the 1974 SOLAS Convention in the areas covered by these systems, as follows:

.1 the International NAVTEX Service transmissions in coastal regions; and

.2 the International SafetyNET Service transmissions which cover all the waters of the globe, except for polar regions.

2.3.2 Information should be provided for unique and precisely defined sea areas, each being served only by the most appropriate of the above systems. Although there will be some duplication to allow a vessel to change from one system to another, the majority of messages will only be broadcast on one system.

2.3.3 NAVTEX transmissions should be made in accordance with the standards and procedures set out in the NAVTEX Manual. These transmissions are subject to approval by the Maritime Safety Committee. The means of obtaining this approval is described in the NAVTEX Manual.

2.3.4 International SafetyNET Service transmissions should be made in accordance with the standards and procedures set out in the International SafetyNET Manual.

2.3.5 Member Governments may also choose to provide supplementary equivalent broadcasts of maritime safety information in other modes using other frequencies. These may include national NAVTEX services on 4,209.5 kHz and 490 kHz and HF/NBDP broadcasts.

2.4 RECEPTION FACILITIES

2.4.1 Ships are required to be capable of receiving maritime safety information broadcasts for the area in which they operate. This requirement is set out in chapter IV of the 1974 SOLAS Convention, as amended.

2.4.2 The International SafetyNET Service receiving facility should conform to part A of the Inmarsat design and installation guidelines for EGC SafetyNET equipment and should meet the performance standards adopted by the Organization by resolution A.664(16).

2.4.3 The NAVTEX receiver should operate in accordance with the technical specifications set out in CCIR Recommendation 540, as amended, and should meet the performance standards adopted by the Organization by resolution A.525(13).

2.5 PROVISION OF INFORMATION

2.5.1 Navigational warnings should be provided in accordance with the standards, organization and procedures of the WWNWS under the functional guidelines of the International Hydrographic Organization through its Commission on Promulgation of Radio Navigational Warnings.

2.5.2 Meteorological information should be provided in accordance with the technical regulations and recommendations of the World Meteorological Organization (WMO).

2.5.3 Distress alerts should be provided by the various authorities responsible for co-ordinating maritime search and rescue operations in accordance with the standards and procedures established by the Organization.

2.6 CO-ORDINATION PROCEDURES

2.6.1 In order to make the best use of automated reception facilities and to ensure that the mariner receives the minimum information necessary for safe navigation, careful co-ordination is required.

2.6.2 In general, this requirement for co-operation and co-ordination will be met by the standard operational procedures of IHO, WMO, ITU and INMARSAT.

2.6.3 Cases of difficulty should be referred, in the first instance, to the most appropriate parent body.

2.6.4 Member States wishing to provide maritime safety information services should nominate a national Co-ordinator for each type of information concerned, informing the Organization of such nominations as they are made. The Organization will maintain and, through the Maritime Safety Committee, publish a list of the nominated co-ordinators.

2.6.5 The establishment of transmissions in the International NAVTEX Service is co-ordinated by the Maritime Safety Committee. Detailed guidance on the provision of NAVTEX services is contained in the NAVTEX Manual.

2.6.6 The use of satellite maritime safety information services is co-ordinated by the Maritime Safety Committee.

2.6.7 The designation of service areas is an important part of the co-ordination process since it is intended that a vessel should be able to obtain all the information relevant to a given area from a single source. Information co-ordinators should, therefore, design their broadcasts to suit a particular service area. The Maritime Safety Committee will designate service areas for the International SafetyNET service and the International NAVTEX service. In doing so, the Committee will take full account of the character and volume of information and the pattern of maritime traffic in the region and the advice of IHO and WMO.

3 - RADIO NAVIGATIONAL WARNINGS FOR THE WORLD-WIDE NAVIGATIONAL WARNING SERVICE

3.1 GENERAL CONSIDERATIONS

3.1.1 Radio Navigational Warnings are essentially HAZARD WARNINGS. In accordance with the WWNWS Guidance Document, section 4.2.1.3 (IHO/IMO Special Publication S-53), the following subject areas are considered suitable for transmission as NAVAREA warnings. This list is not exhaustive and should be regarded only as a guideline. Furthermore, it presupposes that sufficiently precise information about the item has not previously been disseminated in notice to mariners:

.1 casualties to lights, fog signals and buoys affecting main shipping lanes;

.2 the presence of dangerous wrecks in or near main shipping lanes and, if relevant, their marking;

.3 establishment of major new aids to navigation or significant changes to existing ones when such establishment or change might be misleading to shipping;

.4 the presence of large unwieldy tows in congested waters;

.5 drifting mines;

.6 areas where search and rescue (SAR) and anti-pollution operations are being carried out (for avoidance of such areas);

.7 at the request of the controlling MRCC, notification of ships and aircraft on or over the open sea reported in distress, seriously overdue or missing;

.8 the presence of newly discovered rocks, shoals, reefs and wrecks likely to constitute a danger to shipping, and, if relevant, their marking;

.9 unexpected alteration or suspension of established routes;

.10 cable or pipe-laying activities, the towing of large submerged objects for research or exploration purposes, the employment of manned or unmanned submersibles, or other underwater operations constituting potential dangers in or near shipping lanes;

.11 establishment of offshore structures in or near shipping lanes;

.12 significant malfunctioning of radionavigational service and shore-based maritime safety information radio or satellite services.

Navigational warnings are issued in response to SOLAS V/2.b and carry information which may have a direct bearing on the safety of life at sea. It is the fundamental nature of navigation warnings that they will often be based on incomplete or unconfirmed information and mariners will need to take this into account when deciding what reliance to place on the information contained therein.

3.1.2 IMO resolution A.706(17) requires the use of the English language for NAVAREA and Coastal Warnings of the WWNWS. It must always be remembered that the majority of mariners receiving radio navigational warnings are only professional users of English who do not speak or read it naturally. Warnings therefore must be written so as to be easily understood by all mariners.

3.1.3 In order to achieve maximum impact on the mariner it is necessary to present information so that it is CLEAR, UNAMBIGUOUS and BRIEF. This can be ensured by using structured messages which present the text in a standard format with key words to emphasize the most important features of the message.

3.1.4 The resources employed by administrations and the mariner are extremely limited. Thus only information which is vital to the safe conduct of vessels should be transmitted. Notices to Mariners and other means exist for passing less urgent information to ships after they have reached port. Information of a purely administrative nature should never be broadcast on the regular international navigational warning schedules.

3.2 THE STRUCTURE OF RADIO NAVIGATIONAL WARNINGS

3.2.1 The minimum information which a mariner requires to avoid danger is:

HAZARD + POSITION

It is usual, however, to include sufficient extra detail to allow some freedom of action in the vicinity of the hazard. This means that the message must give enough extra data for the mariner to be able to RECOGNIZE the hazard and ASSESS its effect upon his navigation. In some cases it will be desirable to include an estimate of the DURATION of the event.

3.2.2 The text of any radio navigational warning will need to contain some or all of the STANDARD ELEMENTS, as indicated below:

STANDARD ELEMENTS		NAVAREA	COASTAL	LOCAL
Message ID*	Consecutive No.	*	*	
Preamble	1. General Area	*		
	2. Locality	*	*	*
	3. Chart Number	*	*	
Warning	4. Key Subject	*	*	*
	5. Geographical Position	*	*	*
	6. Amplifying Remarks	*	*	*
Postscript	7. Cancellations	*	*	*

* See WWNWS Guidance Document, section 5.1 (IHO/IMO Special Publication S-53)

3.2.3 The remainder of this section of the Manual is divided into three sections, which give guidance on the correct way of phrasing each part of the warning to achieve maximum impact with minimum broadcast time, as follows:

Section A - Preamble

Section B - Warning (by type of hazard, as described in detail in the WWNWS Guidance Document, section 4.2.1.3)

Section C - Additional notes on Time and Position

PREAMBLE **A1**

IDENTIFIER, GENERAL AREA, LOCALITY, CHART NUMBER

MESSAGE IDENTIFIER	The first words of the text of every warning message must always be MESSAGE SERIES IDENTIFIER followed by the CONSECUTIVE NUMBER e.g. NAVAREA THREE 496; NAVAREA SEVEN 042; NITON RADIO WZ 229; OOSTENDE RADIO NAV WING 767. Note: 1) Message numbers re-start at 001 each year. 2) The Consecutive Number is not the same as the NAVTEX Number B3B4.
GENERAL AREA	The General Area should be sufficient to identify which broad sub-division of a NAVAREA the message affects. For instance 'NORTH SEA' or 'MALACCA STRAIT' would be correct; 'NORTH AMERICA, EAST COAST' is too general. NAVAREA-wide events, e.g. OMEGA or SATNAV warnings, use a NAVAID IDENTIFICATION ACRONYM instead of a General Area (See page B9).
LOCALITY	The Locality should be stated in terms which allow the mariner to identify warnings which affect his passage without having to plot them e.g. 'Thames Estuary' or 'Pinang Approach'. Locality will only need to be stated when it is desirable to refine the General Area.
CHART NUMBER	NAVAREA Warnings normally require reference to an International Chart if one exists. If not, they should preferably reference a chart of the locality (not necessarily the largest scale). The Chart Series should always be quoted, e.g. INT Chart 649, BA Chart 471, etc. Chart numbers are not normally required for Coastal and Local Warnings which are only broadcast in the vicinity of the hazard.

LIGHTS - Casualties **B1**

LIGHTHOUSES, BEACONS, LIGHT VESSELS		
Key Subject	Remarks	Comments
MALABRIGO POINT LIGHT, 24-45N 033-56E SANDETTIE LIGHT VESSEL, 51-14N 002-33E PHILIP SHOAL BEACON, 18-21.5S 046-37.5W	UNLIT	Incorrect Terms include: Out, Extinguished, Not Burning, Not Working.
	LIGHT UNRELIABLE	Incorrect Terms include: Weak, Dim, Low Power, Fixed, Flashing Incorrectly, Out of Character.
	DESTROYED	Temporarily Destroyed is incorrect. Note: If temporary buoy established, see WRECKS page for additional phrases.
	FOG SIGNAL INOPERATIVE	Only for major fog signal stations. Generally, fog signal casualties will not need a broadcast.

NOTES:
A. Use CHARTED names, not LISTED names.
B. LIGHT LIST number not required.
C. POSITION normally quoted to nearest whole minute.
D. If the report is unconfirmed, use LIGHT UNRELIABLE. Do NOT use 'REPORTED'.
E. Temporary use of a listed reserve light is to be expected. It is not a change of character.
F. Damage to DAYMARKS is not usually worth a navigational warning.
G. Do not use a navigational warning to request reports on an unwatched light.
H. International Chart Abbreviations for light characters are ONLY suitable for NAVTEX, Telex or Morse transmissions. Voice Broadcasts should be drafted using the Table of Equivalents - page B4. This is preferred for NAVTEX, Telex and Morse also.

NEW and CHANGED Lights - see page B2 and B3

Light Vessels OFF STATION - see page B5

LIGHTS - Changed **B2**

LIGHTHOUSES, BEACONS, LIGHT VESSELS		
Key Subject	Remarks	Comments
ORFORDNESS LIGHT, 51-30N 000-20E ST. ALBANS HEAD LIGHT, 51-00N 000-16E	CHANGED TO FLASH THREE 20 SECONDS 14 METRES 16 MILES	PERMANENT change of character.
	TEMPORARILY CHANGED TO QUICK FLASH YELLOW 12 MILES	Temporary change. Do not use for listed reserve light.

NOTES:
A. Always quote FULL LIGHT CHARACTERISTIC to avoid confusion over what has been changed.
B. Use light descriptions as given on page B4.
C. Position is normally quoted to nearest whole minute for existing lights. See page B3 for new or changed positions.

LIGHTS - New, Moved or Re-established **B3**

LIGHTHOUSES, BEACONS, LIGHT VESSELS		
Key Subject	Remarks	Comments
FLAMBOROUGH HEAD LIGHT, FLASH THREE 20 SECONDS 22 METRES 21 MILES	ESTABLISHED 21-14.6N 000-16.3W	New Light.
NARESBORO LIGHT VESSEL, FLASH RED 5 SECONDS 14 MILES	MOVED 0.3 MILES NORTH TO 63-14.8N 022-15.6E	Do not quote former geo-graphical position. Indicate former position by approximate direction and distance.
	RE-ESTABLISHED	For CHARTED or LISTED as DESTROYED. See NOTE A.

NOTES:
A. RE-ESTABLISHED is only appropriate for lights which have previously been CHARTED or LISTED AS DESTROYED. Navigational Warnings concerning such lights are merely Cancelled when the light is re-established. A new Navigational Warning is only required if the Character or Position is changed. See page B2 or above.
B. Quote accurate CHARTED position; in Degrees, Minutes and Decimal Minutes (maximum 2 decimal places).
C. Distances should be quoted in miles and decimal miles.

LIGHTS - GLOSSARY OF DESCRIPTIVE TERMS **B4**

CLASS OF LIGHT	Description for NAVAREA broadcasts	Description for Coastal or Local broadcasts
Fixed (steady light)	F	Fixed
Occulting (total duration of light more than dark)		
Single-occulting	Oc	Occulting
Group-occulting	Oc(2)	Occulting Two
Composite group-occulting	Oc(2+3)	Occulting two plus three
Isophase (equal periods light and dark)	ISO	ISO
Flashing (total duration of light less than dark)		
Single-flashing	Fl	Flash
Long-flashing	LFl	Long Flash
Group-flashing	Fl(3)	Flash Three
Composite group-flashing	Fl(2+1)	Flash two plus one
Quick (50 to 79-usually either 50 or 60 flashes per minute)		
Continuous quick	Q	Quick Flash
Group quick	Q(3)	Quick Flash Three
Interrupted quick	IQ	Interrupted Quick Flash
Very Quick (80 to 159-usually either 100 or 120 flashes per minute)		
Continuous very quick	VQ	Very Quick Flash
Group very quick	VQ(3)	Very Quick Three
Interrupted very quick	IVQ	Interrupted Very Quick Flash
Ultra Quick (160 or more-usually 240 or 300 flashes per minute)		
Continuous ultra quick	UQ	Ultra Quick Flash
Interrupted ultra quick	IUQ	Interrupted Ultra Quick Flash
Morse Code	Mo(K)	Morse Kilo
Fixed and Flashing	FFl	Fixed and Flashing
Alternating	ALWR	Alternating

LIGHTS - GLOSSARY OF DESCRIPTIVE TERMS **B4-2**

<table>
<tr><td>COLOUR</td><td colspan="3">ELEVATION in METRES or FEET, e.g. 14 METRES, 21 FEET</td></tr>
<tr><td rowspan="2">White
Red
Green
Yellow
Orange
Blue
Violet</td><td colspan="3">PERIOD in SECONDS, e.g. 15 SECONDS (NOT Sec or S)</td></tr>
<tr><td>RANGE in sea miles</td><td></td><td>International abbreviations</td><td>RANGE for broadcast</td></tr>
<tr><td colspan="2">Single range</td><td>e.g.</td><td>15M</td><td>15 MILES</td></tr>
<tr><td colspan="2">2 ranges</td><td>e.g.</td><td>14/12M</td><td>14 AND 12 MILES</td></tr>
<tr><td colspan="2">3 or more ranges</td><td>e.g.</td><td>22-18M</td><td>22 TO 18 MILES</td></tr>
<tr><td colspan="4"></td><td>Shortest Range only will often be sufficient.</td></tr>
</table>

BUOYS **B5**

BUOYS, LANBYS, SUPERBUOYS		
Key Subject	Remarks	Comments
SANDETTIE NORTH BUOY 51-18N 002-05E CORK LANBY 51-56N 001-29E SMITHS KNOLL LIGHT VESSEL	UNLIT	Incorrect terms include: Out, Extinguished, Not burning, Light unlit.
	LIGHT UNRELIABLE	Incorrect terms include: Weak, Dim, Low power, Fixed, Out of Character, Irregular, Reduced power.
	DAMAGED	No action for Topmark or Radar Reflectors. Use only for major damage, e.g. loss of superstructure.
	OFF STATION	Buoys not in charted position.
	MISSING	Completely absent from position.
EAST CARDINAL BUOY VERY QUICK FLASH THREE 5 SECONDS ESTABLISHED _____ _____		New buoy. Quote position to 2 decimal minutes if possible.

NOTES:
A. Do not use 'Reported'
B. POSITION normally quoted to nearest whole minute.
C. UNLIT may be used to amplify 'DAMAGED' as in 'DAMAGED and UNLIT'.
D. 'LANBY' (Large Automated Navigational Buoy) or 'SUPERBUOY' may be used in lieu of 'BUOY' where appropriate.
E. Do NOT describe the type of buoy, e.g. North Cardinal buoy, Wreck buoy, Port Hand buoy unless the buoy is unnamed.

FOG SIGNALS - see page B1

GLOSSARY OF BUOYAGE TERMS **B5-2**

IALA BUOYAGE	Comments
PORT) HAND BUOY STARBOARD) NORTH) EAST) SOUTH) CARDINAL BUOY WEST) ISOLATED DANGER BUOY SAFE WATER BUOY SPECIAL BUOY	Full Description of light and colour not required for IALA standard buoys. "Lightbuoy" may be used to indicate that the buoy is lit.

OTHER BUOYS

COLOURS	PATTERN	SHAPE/TYPE
RED	CHEQUERED	CAN
BLACK	HORIZONTALLY STRIPED	CONICAL (not OGIVAL or NUN)
WHITE	VERTICALLY STRIPED	PILLAR
GREEN		SPAR
YELLOW		SPHERICAL
		WRECK
		CABLE (not Telegraph)
		MOORING
		DANGER ZONE
		ODAS
		SINGLE POINT MOORING (not SPM)

BOTTOM FEATURES **B6**

WRECKS, REEFS, ROCKS	
Key Subject	Comments
UNCHARTED REEF REPORTED 03-42S 016-21W	Position unconfirmed
DANGEROUS WRECK LOCATED 34-15.2W 014-15.5W	Position confirmed usually by survey
VOLCANIC ACTIVITY REPORTED _____ _____ CAUTION ADVISED	
ARTHUR ISLAND _____ _____ reported to lie about two miles west of charted position.	

NOTES:
A. These reports may be amplified as follows: "..... marked by south cardinal buoy 0.2 miles southward."
B. Position Approximate (PA) is not appropriate since all "reported" hazards will be of this nature by definition.

DRIFTING HAZARDS **B7**

Key Subject	Comments
SUPERBUOY ADRIFT IN VICINITY _____ _____ AT 231641 UTC HAZARDOUS MINE ADRIFT IN VICINITY _____ _____ AT _____ UTC UNLIT DERELICT TANKER ADRIFT IN VICINITY _____ _____ AT _____ UTC	The time of the position report should ALWAYS be included when known.
NOTES: A. Consideration should be given to cancelling the warning after sufficient time has elapsed for the position to have become degraded. B. Time is to be UTC. See page C1.	

MISCELLANEOUS **B8**

Key Subject	Comments
CABLE OPERATIONS BY CABLESHIP "NAME" IN VICINITY ____ ____. FROM ____ ____ UTC TO ____ ____ UTC. WIDE BERTH REQUESTED.	Use "requested" when wide berth is for benefit of cableship.
CABLE OPERATIONS BY CABLESHIP "NAME" OPERATING WITH SUBMERSIBLE AND GUARDSHIP BETWEEN ____ ____ AND ____ ____. FROM ____ ____ UTC TO ____ ____ UTC. CONTACT VHF CHANNEL 12. WIDE BERTH ADVISED.	Use "advised" when operations create a significant hazard.
LARGE UNWIELDLY TOW FROM LE HAVRE ____ ____ TO BOSTON ____ ____. WIDE BERTH REQUESTED.	
FIRING EXERCISES FROM ANDOYA RANGE IN AREA BOUNDED BY ____ ____, ____ ____, ____ ____ AND ____ ____. FROM ____ ____ UTC VHF CHANNEL 16 BEFORE TRANSITING AREA. CAUTION ADVISED.	
95 FOOT FISHING VESSEL "NAME" UNREPORTED ON VOYAGE FROM MIAMI TO GIBRALTAR. REPORT SIGHTINGS TO COAST GUARD MIAMI.	
SEISMIC SURVEY BY MV "FOX" TOWING 3000 METRE ARRAY IN AREA BOUNDED BY ____ ____. ____ ____. ____ ____ AND ____ ____. FROM ____ ____ UTC TO ____ ____ UTC. WIDE BERTH REQUESTED.	
VESSEL IN DISTRESS. MV "PLUGLESS" SINKING IN VICINITY ____ ____. ASSISTANCE REQUIRED. REPORTS TO COAST GUARD MIAMI.	Position known.
VESSEL IN DIFFICULTY. MV "GUY FAWKES" ON FIRE. ASSISTANCE REQUIRED. REPORT TO FALMOUTH COAST GUARD OR CROSS JOBURG.	Position Unknown. Reporting point may be "nearest/any Coast Guard station".

ELECTRONIC NAVAIDS **B9**

Key Subject	Comments
OMEGA. STATION F ARGENTINA OFF AIR _____ UTC TO _____ UTC. CANCEL THIS MESSAGE _____ UTC.	Cancel 1 hour after time of restoration (if known).
GPS. SATELLITE PRN 13 UNUSABLE _____ UTC to _____ UTC. CANCEL THIS MESSAGE _____ UTC.	Messages concerning long range electronic navaids will not normally need a General Area, Locality or Chart Number.
SATNAV. TRANSIT. SATELLITE 30230-12 UNUSABLE.	Do not use "Until Further Notice" since the fact that the event is complete will always be apparent from the cancellation message.
LORAN. STATION SAINT PAUL ISLAND 9990 MASTER OFF AIR _____ UTC TO _____ UTC. CANCEL THIS MESSAGE _____ UTC.	
DECCA. JAPAN SEA AND EASTERN CHINA SEA. NORTHERN KYUSYU DECCA CHAIN 7C OFF AIR.	
DECCA. NORTHWEST BRITISH CHAIN 3B. RED TRANSMISSION OFF AIR. CANCEL THIS MESSAGE _____ UTC.	Message cancels 1 hour after event completes.
OMEGA. POLAR CAP DISTURBANCE IN PROGRESS. SIGNALS INVOLVING POLAR PATHS MAY HAVE ERRORS AS GREAT AS ONE FIFTH A LANE OR MORE.	Use "Disturbance" instead of "anomaly" or "absorption".

PIRACY/ARMED ROBBERY **B10**

Key Subject	Comments
CHART NR. _____ MV ALWAYS SAIL REPORTS ACT OF PIRACY/ARMED ROBBERY IN VICINITY 17-40N 095-06E AT 0600 UTC. TWO ZODIACS CARRYING 3 - 4 MEN EACH APPROACHING FROM ASTERN AT 20 KNOTS AT FIRST LIGHT. ATTEMPTED TO BOARD PORT SIDE AFT. REPELLED. CAUTION ADVISED.	Broadcast as Safety message. Add amplifying information if available.
PIRACY ATTACKS/ARMED ROBBERY CONCENTRATED IN PHILLIP CHANNEL BETWEEN _____ AND _____. REPORTED ATTACKS ALWAYS OCCUR AT NIGHT. VESSELS ADVISED TO MAINTAIN ANTI-PIRACY WATCHES. ALL SUSPICIOUS OR UNEXPLAINED CRAFT MOVEMENTS OR PIRACY ATTACKS SHOULD BE REPORTED IMMEDIATELY TO THE (NEAREST RCC, NATIONAL OR REGIONAL PIRACY CENTRE OR THE NEAREST POINT ON THE COAST WITH WHICH THEY CAN COMMUNICATE).	( ), for example, Regional Piracy Centre, KUALA LUMPUR, TEL: 60 3 2010014 FAX: 60 3 2385769 TELEX: MA 31880.

SHORE BASED RADIO FACILITIES **B11**

Key Subject	Comments
NAVTEX. BOSTON STATION F OFF AIR	Do not use "Until Further Notice" since the fact that the event is complete will always be apparent from the cancellation message.
RADIO SERVICES. COAST GUARD STATION MIAMI HAS RECEIVED HEAVY DAMAGE FROM HURRICANE _____ AND IS OFF AIR. STATION _____ IS ASSUMING RESPONSIBILITY FOR EMERGENCY TRAFFIC AND SHIP REPORTS.	Add in back up facility if one is available.

SAR INFORMATION **B12**

Key Subject	Comments
DISTRESS ALERT RELAY. M/V NONSUCH REPORTED IN DISTRESS IN POSITION _____ N/S _____ E/W AT (DATE/TIME UTC). VESSELS ABLE TO PROVIDE ASSISTANCE CONTACT MRCC _____	Use "Unknown vessel" where ship's name is not known. Add contact numbers for the MRCC if available. Radio channels should not be quoted since they are readily available from other sources.
SHIP OVERDUE. M/V LOST AGAIN REPORTED OVERDUE ON VOYAGE FROM SYDNEY TO ROTTERDAM. LAST REPORTED IN VICINITY _____ N/S _____ E/W AT (DATE/TIME) UTC. REPORTS TO ANY RCC.	

CANCELLATIONS **B13**

Key Subject	Comments
A. CANCEL 123/92 AND THIS MESSAGE.	Stand alone cancellation messages may be in form A. or B.
B. SELF CANCELLING. CANCEL AUSCOAST 42. SURVEY COMPLETE.	Only include a reason for the cancellation if it can be stated concisely and is not obvious.
C. (MESSAGE TEXT - EVENT OF KNOWN DURATION). CANCEL THIS MESSAGE _____ UTC.	Choose a time for self cancelling messages (type C.) <u>one</u> hour after the event completes or <u>one</u> day later if time is not accurately known.
D. CANCEL TALLINN RADIO COAST WARNING 87/94 ON RECEIPT OF RUSSIAN NOTICE TO MARINERS 520/94; OR	
E. CANCEL TALLINN RADIO COAST WARNING 87/94. RUSSIAN NOTICE TO MARINERS 520/94 REFERS.	
BULLETIN	
NAVAREA <u>XXX</u> WARNINGS IN FORCE. ONLY THOSE ISSUED IN THE LAST 42 DAYS ARE INCLUDED. XXXX XXXX XXXX XXXX XXXX XXXX XXXX XXXX	Normally only includes those issued in previous 42 days.

C1

DATE AND TIME

Time should always be quoted in UTC. The standard form is DDHHMM UTC MoMoMo YY; e.g. 231642 UTC JUN 92.

POSITION

Position should always be given in Degrees, Minutes and decimal minutes in the form:

DD - MM.mm N or S
DDD - MM.mm E or W

e.g. 1) 32-18.65 S 2) 07-08.71 N
165-02.81 E 039-17.21 W

Note that leading zeros should always be included. Three digits are used for reporting degrees Longitude.

Positions should only be quoted to the accuracy required. In many cases this will be less than the known accuracy. For example, it will often be sufficient to quote position to the nearest whole minute of Latitude and Longitude when indicating the location of a charted feature. The best accuracy available (to a maximum of 0.01 minutes) should be used when broadcasting the position of new hazards.

The same level of accuracy should always be quoted for both Latitude and Longitude.

4 - METEOROLOGICAL WARNINGS AND FORECASTS FOR THE HIGH SEAS

4.1 PROVISION OF WARNINGS AND WEATHER AND SEA BULLETINS (GMDSS APPLICATION)

Global Maritime Distress and Safety system (GMDSS) application which is compatible with and required by the radiocommunication provisions of the 1988 SOLAS amendments via the NAVTEX, International SafetyNET and HF MSI Services.

Principles

The principles for the preparation and issue of warnings and weather and sea bulletins are as follows:

Principle 1

for the purpose of the preparation and issue of meteorological warnings and the regular preparation and issue of weather and sea bulletins, the oceans and seas are divided into areas for which national Meteorological Services assume responsibility.

Principle 2

The areas of responsibility together provide complete coverage of oceans and seas by meteorological information contained in warnings and weather and sea bulletins for the high seas.

Principle 3

The issue of meteorological warnings and routine weather and sea bulletins for areas not covered by NAVTEX shall be by the International SafetyNET Service for the reception of maritime safety information (MSI) in compliance with SOLAS, chapter IV, "RADIOCOMMUNICATIONS".

Note: In addition, national Meteorological Services may have to prepare and/or issue warnings and routine forecasts for transmission by an HF-direct-printing telegraphy maritime safety information service for areas where such a service is provided for ships engaged exclusively on voyages in such areas.

Principle 4

The preparation and issue of warnings and weather and sea bulletins for areas of responsibility is co-ordinated in accordance with the procedures mentioned in the following section.

Principle 5

The efficiency and effectiveness of the provision of warnings and of weather and sea bulletins is monitored by obtaining opinions and reports from marine users.

Principle 6

Maritime Safety Information broadcasts are monitored by the originating Issuing Service to ensure the accuracy and integrity of the broadcast.

4.2 PROCEDURES

Definitions

A "Preparation Service" is a national Meteorological Service which has accepted responsibility for the preparation of forecasts and warnings for parts of, or an entire, designated Maritime Safety Information (MSI) area in the WMO system for the dissemination of meteorological forecasts and warnings to shipping under the GMDSS and for their transfer to the relevant Issuing Service for broadcast.

An "Issuing Service" is a national Meteorological Service which has accepted responsibility for ensuring that meteorological forecasts and warnings for shipping are disseminated through the INMARSAT SafetyNET service to the designated area for which the Service has accepted responsibility under the broadcast requirements of the GMDSS. The Issuing Service is responsible for composing a complete broadcast bulletin on the basis of information input from the relevant Preparation Services, and for inserting the appropriate EGC header, as specified in Annex 4(b) of the International SafetyNET Manual. The Issuing Service is also responsible for monitoring the broadcasts of information to its designated area of responsibility.

Preparation and issue of weather and sea bulletins for the high seas.

Weather and sea bulletins for the high seas shall include, in the order given hereafter.

Part I : Storm warnings;

Part II : Synopsis of major features of the surface weather chart and, to the extent possible, significant characteristics of corresponding sea-surface conditions;

Part III : Forecasts.

Weather and sea bulletins for the high seas may, in addition, include the following parts:

Part IV : Analyses and/or prognoses in IAC FLEET code form;

Part V : Selection of reports from sea stations;

Part VI : Selection of reports from land stations.

NOTES: (1) The reports included in Part VI should be for a fixed selection of stations in a fixed order.

(2) Parts IV, V and VI may be issued at a separate, scheduled time.

For area(s) for which an Issuing Service has assumed responsibility, the Service shall select the appropriate CES to service that area.

NOTES: (1) As there are several CESs which can serve an Ocean Region and hence an area of broadcast responsibility, Issuing Services may negotiate directly with the various CES operators to obtain the most favourable tariff (and service) consideration.

(2) In order to ensure reception of unscheduled broadcasts by shipping in an area which is served by more than one satellite and recognizing that the national Meteorological Services will not know to which of these satellites the ship's equipment is tuned, the following procedures shall be adopted by Issuing Services:

For scheduled broadcasts: These shall be issued for broadcast over at least a single nominated satellite, in accordance with a pre-arranged schedule, co-ordinated by WMO.

For unscheduled broadcasts: These shall be issued for broadcast under the SafetyNET Service through all Inmarsat ocean region satellites covering the Issuing Service's area of responsibility.

Weather and sea bulletins shall be prepared and issued at least twice daily.

The issue of the weather and sea bulletins shall be at a scheduled time and be in the following sequence: Part I to be followed immediately by Part II and then Part III. A schedule of transmission start times for these bulletins has been compiled for all MSI areas and the CESs which serve the areas and takes into consideration, *inter alia*, the existing WMO synoptic times for observations, data analysis and forecast production. Additionally, as these broadcast schedules for the International SafetyNET Service have to be co-ordinated, under the aegis of WMO, with other organizations such as IHO, Issuing Services should not independently change or request WMO to arrange frequent alterations to these co-ordinated and published schedules.

Issuing Services must ensure that the correct EGC message addressing formats are adhered to for all warning and forecast messages intended for broadcast by a CES.

Warnings, synopses and forecasts shall be given in plain language;

Warnings, synopses and forecasts intended for the International SafetyNET Service shall be broadcast in English.

NOTE: Additionally, if a national Meteorological Service wishes to issue warnings and forecasts to meet national obligations under SOLAS, broadcasts may be made in other languages. These broadcasts will be part of a national SafetyNET Service.

In order to ensure the integrity of the warnings and forecasts being received by mariners, it is essential that Issuing Services monitor the broadcasts which they originate. Monitoring is especially important in a highly automated system which is dependent on careful adherence to procedure and format. This may be accomplished by the installation of an EGC receive-capability at the Issuing Service's facility.

NOTE: Each Issuing Service may use the EGC receiver to check the following:

(1) That the message has been broadcast;
(2) That the message is received correctly;

(3) That cancellation messages are properly executed;
(4) Any unexplained delay in the message being broadcast.

The language of the synopsis should be as free as possible from technical phraseology.

The terminology in weather and sea bulletins should be in accordance with the "Multilingual list of terms used in weather and sea bulletins".

NOTE: The multilingual list of terms used in weather and sea bulletins is given in Annex 1-2.A of the Guide to Marine Meteorological Services (WMO-No. 471) and in Appendix II-6 hereto.

4.3 WARNINGS

Warnings shall be given for gales (Beaufort force 8 or 9) and storms (Beaufort force 10 or over), and for tropical cyclones (hurricanes in the North Atlantic and eastern North Pacific, typhoons in the Western Pacific, cyclones in the Indian Ocean and cyclones of similar nature in other regions).

The issue of warnings for near gales (Beaufort force 7) is optional.

Warnings for gales, storms and tropical cyclones should have the following content and order of items:

(a) Type of warning;

(b) Date and time of reference in UTC;

(c) Type of disturbance (e.g. low, hurricane, etc.) with a statement of central pressure in hectopascals;

(d) Location of disturbance in terms of latitude and longitude or with reference to well-known landmarks.

(e) Direction and speed of movement of disturbance;

(f) Extent of affected area;

(g) Wind speed or force and direction in the affected areas;

(h) Sea and swell conditions in the affected area;

(i) Other appropriate information such as future positions of disturbance.

Items (a), (b), (d), (f) and (g) listed above shall always be included in the warnings.

When warnings are included for more than one pressure disturbance or system, the system should be described in a descending order of threat.

Warnings shall be as brief as possible and, at the same time, clear and complete.

The time of the last location of each tropical cyclone or extra-tropical storm shall be indicated in the warning.

A warning shall be issued immediately the need becomes apparent, and broadcast immediately on receipt, followed by a repeat after six minutes, when issued as an unscheduled broadcast.

When no warnings for gales, storms or tropical cyclones are to be issued, that fact shall be positively stated in Part I of each weather and sea bulletin.

Warnings shall be updated whenever necessary and then issued immediately.

Warnings shall remain in force until amended or cancelled.

Warnings issued as Part I of a scheduled bulletin do not need to be repeated after 6 minutes.

4.4 SYNOPSES

The synopses given in Part II of weather and sea bulletins shall have the following content and order of items:

(a) Date and time of reference in UTC;

(b) Synopsis of major features of the surface weather chart;

(c) Direction and speed of movement of significant pressure systems and tropical disturbances.

Significant characteristics of corresponding wave conditions (sea and swell) should be included in the synopsis whenever this information is available, as well as characteristics of other sea-surface conditions (drifting ice, currents, etc.) if feasible and significant;

Significant low-pressure systems and tropical disturbances which affect or are expected to affect the area within or near to the valid period of the forecast should be described; the central pressure and/or intensity, location movement and changes of intensity should be given for each system; significant fronts, high-pressure centres, troughs and ridges should be included whenever this helps to clarify the weather situation.

Direction and speed of movement of significant pressure systems and tropical disturbances should be indicated in compass points and metres per second or knots respectively.

Units used for speed of movement of systems shall be indicated.

4.5 FORECASTS

The forecasts given in Part III of weather and sea bulletins shall have the following content and

order of items:

(a) The valid period of forecast;

(b) Name or designation of forecast area(s) within the main MSI area:

(c) A description of:

(i) Wind speed of force and direction;

(ii) Visibility when forecast is less than six nautical miles (ten kilometres);

(iii) Ice accretion, where applicable;

(iv) Waves (sea and swell).

The forecasts should include expected significant changes during the forecast period, significant meteors such as freezing precipitation, snowfall or rainfall, and an outlook for a period beyond that normally covered by the forecast.

The valid period shall be indicated either in terms of number of hours from the time of issue of forecast or in terms of dates and items in UTC of the beginning and end of the period.

Visibility should be indicated in nautical miles or kilometres or given in descriptive terms.

Units used for visibility shall be indicated.

5 - SEARCH AND RESCUE

It is expected that the format for the drafting of Search and Rescue messages under the GMDSS will be developed in due course.

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